

Application No. 10/031,690
Amendment dated January 6, 2006
Reply to the Office Action of July 7, 2005

Remarks

Status of the Claims

Claims 14 and 27-28 are amended. Claims 1-13 were cancelled previously. Claims 14-33 are pending.

Support for Amendments to the Claims

Support for the amendments is found throughout the specification, and particularly on page 2, lines 14-19, page 4, lines 18-22, page 5, lines 24-29, and page 6, lines 10-16.

Rejections under 35 U.S.C. § 103(a)

Claims 14-27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Publication No. 20030093941 (now U.S. Patent No. 6,348,064) to Wenzel (hereinafter referred to as Wenzel). Claims 14 (from which Claims 15-26 depend) and Claim 27 are amended to clarify the invention.

Wenzel relates to additive compositions that provide for the introduction of water-soluble components into diesel and other distillate fuels. The compositions include (a) one or more water-soluble alcohols (anhydrous or as a 0.5-36% aqueous solution) containing 1-5 carbon atoms, for example, ethanol, and one or more of the following: (b) saturated or unsaturated straight or branched chain alcohols having between about 6-18 carbon atoms; (c) one or more ethoxylated alcohols (straight or branched) having between 6-18 carbon atoms, where the ethylene oxide add-on is less than 5 moles; (d) a fatty acid having from about 10-24 carbon atoms with (e) a source of nitrogen. Components (a) and (b) and/or (c) may be combined with a combustible fuel to form a microemulsion.

The composition according to Claim 14 includes an emulsifier comprising a mixture consisting essentially of (i) a branched-chain fatty alcohol having from 12-24 carbon atoms, and (ii) an ethoxylated fatty alcohol having from 8-24 carbon atoms and from 1-10 moles of ethylene oxide per mole of alcohol. The composition according to Claim 27 includes an emulsifier comprising a mixture consisting essentially of (i) an α -branched-chain fatty alcohol having from 14-24 carbon atoms, and (ii) an ethoxylated fatty alcohol having from 12-18 carbon atoms and from 1-4 moles of ethylene oxide per mole of alcohol.

Application No. 10/031,690
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As acknowledged by the Examiner on page 4 of the Action, "Wenzel . . . does not specially teach a composition wherein the C₁₂₋₂₄ branched alcohol is present". Applicants agree. Despite the lack of disclosure, the Examiner has alleged that "it would have been obvious to one of ordinary skill in the art to have employed such a compound" and that Wenzel "clearly suggest that a branched chain of 18 carbon atoms may be included in the composition" based on the disclosure of a straight chain of 18 carbon atoms.

Wenzel consistently discloses the use of a short chain alcohol (C₁₋₅) as component (a) in combination with one or more of components (b), (c) or (d) as indicated above to form the emulsion. There is absolutely no teaching or suggestion to omit the short chain alcohol. In addition, although Wenzel generally discloses straight and branched chain alcohols, none of the Examples exemplify a C₁₂₋₂₄ branched alcohol. Instead, the sole example in Wenzel of a branched chain alcohol has only 8 carbon atoms (2-ethyl hexanol-1). Moreover, the branched chain alcohol and ethoxylated alcohols are added optionally to the Wenzel composition, whereas the emulsifier mixtures of Claims 14 and 27 consist essentially of branched-chain fatty alcohol and ethoxylated fatty alcohol components.

Presuming, *arguendo*, that one skilled in the art had the foresight to select a branched chain alcohol with 18 carbon atoms as suggested by the Examiner despite a lack of specific disclosure thereof, the result still would not reach the invention, because there is no express or implied teaching, suggestion or motivation provided by Wenzel for combining a branched chain fatty alcohol of 18 carbon atoms with an ethoxylated fatty alcohol having 8-24 (Claim 14) or 12-18 (Claim 27) carbon atoms, in addition to omitting the short chain alcohol (C₁₋₅) to arrive at the subject matter of Claims 14-27.

Contrary to the Examiner's assertions, a *prima facie* case has not been made. With the benefit of Applicants' disclosure, the Examiner has selected various components disclosed by Wenzel, omitted the required short chain alcohol (C₁₋₅), and combined the components in an attempt to arrive at the subject matter of Claims 14-27. The Examiner's approach is in error and contrary to the disclosure of Wenzel. Because there is insufficient disclosure in Wenzel to support the Examiner's position, the rejection should be withdrawn. Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

Application No. 10/031,690
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Claims 28-32 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Wenzel in view of U.S. Patent No. 4, 297,107 to Boehmke (hereinafter referred to as Boehmke). Claim 28 (from which Claims 29-32 depend) is amended to clarify the invention.

The arguments set forth above with regard to Wenzel are reasserted as if set forth at length.

The Boehmke patent relates to fuels comprising a hydrocarbon water and emulsifier wherein the emulsifier is non-ionic and comprises the addition product of ethylene oxide or propylene oxide and a carboxylic acid amide with 9-21 carbon atoms.

The Examiner has alleged that it would have been obvious to use the ethoxylated carboxylic acid amides of Boehmke as Wenzel teaches that too much alcohol and water may lead to corrosion.

The addition of the ethoxylated carboxylic acid amides of Boehmke fail to cure the deficiencies of Wenzel discussed above. In addition, there is no teaching, suggestion or motivation provided by Boehmke or Wenzel to modify Wenzel as suggested and arrive at the subject matter of Claim 28. Therefore, the rejection should be withdrawn. Reconsideration and withdrawal of the rejection is respectfully requested.

Double Patenting Rejection

Claims 14-33 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-15 of copending Application No. 10/473,117. In view of the foregoing amendments, the provisional rejection should be withdrawn. Reconsideration and withdrawal of the rejection is respectfully requested.

In the event the rejection is maintained, Applicants may submit a Terminal Disclaimer if deemed appropriate.

Fees

A Petition for a Three-month Extension of Time and requisite fee are enclosed. No additional fees are believed due. The Commissioner is authorized, however, to charge (or credit any balance) any fees deemed due (or owing) to Deposit Account No. 50-1177.


Application No. 10/031,690
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Conclusion

It is respectfully submitted that Claims 14-33 are in condition for allowance. A Notice of Allowance is respectfully requested. If anything further is needed to advance the allowance of this application, the Examiner is urged to contact Applicants' attorney at the telephone number indicated below.

Respectfully submitted,

Date: January 6, 2006


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